Psychogenic ED

1. Developmental factors	2. Interpersonal factors
Gender identity conflict Traumatic childhood experience Negative family attitude towards sex (religious or social) Paternal & maternal dominance Homosexuality Oedipal complex	Divergent sexual preferences Excessive hatred Dislike female figure Distrust of the partner Marital relationship conflicts

3. Affective factors	4. Cognitive factors
Anxiety Depression Guilt Phobia e.g.pregnancy, STDs and failure.	Sex ignorance Misinterpretation about articles, books or talks about sex Acceptance of cultural and religious orders

Organic ED

Organic ED

Vascular causes ~~Arterial~~ disorder Atherosclerosis, Embolism, Trauma, Leriche Syndrome ~~Venous~~ disorder: venous leakage (failure of corporal veno-occlusive mechanism) ~~Cavernous space disorder~~: fibrosis (post-priapism) & Peyronie's disease	***Neurogenic causes*** Central:cerebro-vascular accident,multiplesclerosis, spinal cord injury, etc Peripheral:peripheral neuropathy
Endocrinal causes 1- Diabetes mellitus (due to neuropathy, atherosclerosis,micro-angiopathyor psychogenic) 2- Hypogonadism e.g. Klinefelter syndrome 3- Hyperprolactinemia 4- Myxedema	***Drug-induced*** Antihypertensives Psychoactive drugs: high dose of major tranquilizers and antidepressants. Addictive agents: alcohol, marijuana, and heroin. Estrogen & antiandrogens
Systemic disorders Liver, renal and heart failure	

3- Diagnostic Procedures For ED:

A) Laboratory Investigations

All ED patients must be subjected to:

- Fasting and post-prandial blood sugar,
- Serum testosterone and prolactin level.

According to clinical suspicion, some patients may need:

- Liver function tests
- Renal function tests
- T_3 - T_4 - TSH level

B) Nocturnal Penile Tumescence (NPT) Monitoring

Normally, during rapid eye movement (REM) stage of sleep, penile erections occur. In adolescents, this happens 4-5 times per night (duration of 15-20 min each). It tends to decrease in duration and frequency with age.

Eliciting the occurrence of these erections during sleep helps to differentiate organic from psychogenic ED. This can be done using:

- Regiscan: This is the most precise method that detects the frequency, degree of rigidity and the duration of nocturnal penile erections.

C) Penile Vascular Studies

➢ **Intracavernous Injection (ICI) Test:**

- This is a screening test for vasogenic ED
- Normally, injection of certain vasodilator agents (e.g. Prostaglandin E_1, papaverine or phentolamine) into the corpora cavernosa leads to full rigid erection this erection starts within 10 min. and lasts for more than 30 min.
- The occurrence of this response is a good positive test that penile haemodynamics are normal.
- In arterial problems: ~~Delay in the onset~~ of erection occurs
- In venous leak: ~~Unsustained~~ erection (< 30 min.) occurs.

- In neurogenic ED: ~~prolonged~~ erection and ~~priapism~~ occur even with the smallest doses of vasoactive agents due to denervation hypersensitivity.

➢ **Confirmatory Tests For Penile Arteriogenic ED:**

- Evaluation of penile arteries is indicated if no or delayed erection

- **Confirmatory Tests For Penile Arteriogenic ED:**
  - Evaluation of penile arteries is indicated if no or delayed erection occurs in the ICI test.
    A. Duplex ultrasonography: This is the method of choice for evaluation of the penile arteries. It allows measurement of diameter and blood velocity in the cavernosal artery before and after injection of the vasoactive drugs.
       - Normal cavernosal arteries show:
         a. Peak systolic velocity more than 25 cm/sec.
         b. Diameter increase after ICI by more than 75%

    B. Selective internal pudendal angiography: This is an invasive procedure performed only before arterial surgery.
- **Confirmatory Tests For Venogenic ED:**
  - These are indicated if a venous leak is suspected by:
    - No or unsustained erection in the ICI test.
    - Duplex shows normal cavernosal arteries with elevated end diastolic velocity more than 5 cm/sec.
  - Cavernosometry: Saline is injected intracavernously (after ICI) at a rate that induces and maintains a rigid erection (I.C. pressure = 150 mm Hg).
    - Normally:
      - Induction rate is less than 40 ml/min.
      - Maintenance rate is less than 15 ml/min.
      - The rate of drop in I.C. pressure after stopping infusion is less than 40 mm Hg in the first half minute.
    - In venous leak, there are higher figures especially the drop of I.C. pressure.
  - Cavernosography: If cavernosometry shows venous leak, intracorporal radio-opaque dye is injected and X-ray is done to demonstrate the leaking veins.

- Testosterone or gonadotropins for hypogonadism
- Bromocriptine for hyperprolactinemia

Medical Treatment

- Empirical treatment
  - Aphrodisiac
  - Herbals and other forms of primitive medicine
  - Androgens: Testosterone
- Phosphodiesterase inhibitors
  - selective cavernous tissue dilator
  - contraindicated in cardiac patients receiving nitrates.
  - Sildenafil (Viagra), Vardinafil (Levitra), Tadalafil (Cialis)
- Alpha adrenergic blockers
  - Yohmbine :presynaptic a2 blocker
  - Phentolamine: a 1&2 blocker
- K channel openers:Minoxidil
- Opioid receptor antagonist: Naltrexone
- Dopamine receptor agonists
  - Trazodone
  - Apomorphine

- Beta-adrenergic stimulant: Isoxupine

Intracavernous Injections (ICI) Therapy

The patient is trained at ICI self-injection that can be used before a desired intercourse. Prostaglandin E_1, papaverine and phentolamine can be used separately or in combination.

Indications:

- Psychogenic ED
- Mild vascular ED

Complications:

- Prolonged erection(2-6 h)
- Priapism(>6h) treated by repeated aspiration of blood from the corpora± ICI of sympathomimetic (ephidrine). If erection persists shunt operation may be done
- Penile pain
- Corporal fibrosis

EJACULATORY DYSFUNCTION

PREMATURE EJACULATION	RETARDED EJACULATION
Definition Inability of the male to control his ejaculatory reflex so that he can satisfy his wife in at least 50% of their coital connections.	**Definition** Inability of the male to reach orgasm intravaginally despite an adequate erection quality.
Incidence *A very common* condition affecting around 40% of patients	**Incidence** Uncommon problem
Etiology *Psychogenic causes (>90%)* *1- Conditioned prematurity*: This occurs when the early sexual experiences have been with prostitutes, through petting or chronic heavy masturbation. *2- Subconscious hatred towards females.* *3- Anxiety and over concern about partner satisfaction.* *4- Unresolved marital problems.* *Organic causes (<10%)* 1. Chronic pelvic congestion e.g. chronic prostatitis 2. Drug-induced e.g. sympathomimetics 3. Neurological disorders e.g. hypersensitive glans penis, MS and neuropathies	**Etiology** *Psychogenic causes* *1- Obsessive compulsive personality* *2- Repressed hostility* *3- Phobias* e.g. ▪ Fear of pregnancy ▪ Religious guilt feelings ▪ Fear of soiling the partner with semen ▪ Oedipal fears of retaliation *Organic causes* 1. Drug-induced e.g. narcotics, sympatholytics and alcohol, 2. Neurological disorders e.g. neuropathies and spinal cord injury

Treatment

1- Minimizing penile receptivity:

- Condom
- Local anesthetics
- Distractive thinking

2- Sex therapy

- Squeeze technique:

Wife stimulates the penis then squeezes the glans firmly when the husband is about to ejaculate. The cycle is repeated several times.

- Start-stop technique:

Stimulation is stopped before ejaculation is inevitable and then resumed once more.

3- Drugs:

- SSRIs (selective serotonin reuptake inhibitors)
- Anafranil

Treatment

1- Sex therapy *increase*

- Sensate focus exercises.
- Desensitization by allowing the patient to masturbate up to ejaculation on his own first, then with his wife, then outside the vagina to resolve his fear of intravaginal ejaculation then finally normal intravaginal ejaculation is tried.

2- Electro-vibratory stimulation:

This is done to obtain semen sample to be used for artificial insemination when fertility is desired.